

ABSTRACT

Disclosed is a power and start system for use with an aircraft engine having a shaft, systems requiring AC power and systems requiring DC power. The system includes an AC/DC starter/generator mechanically coupled to rotate in response to rotation of the engine shaft while the engine is operating in generate mode. Rotation of the starter/generator produces AC and DC power and operates to rotate the shaft of the engine when the engine is in start mode. The system includes a generator control unit which is electrically coupled to the AC/DC starter generator. The generator control unit is also electrically coupled to the systems requiring DC power. A start inverter is configured to be coupled to a DC power source. The start inverter is coupled to the AC/DC starter/generator to provide power for start mode operation. The disclosed system provides multiple levels of redundancy when in the event of a failure to any one or combination f components. Also, the system can be scaled for use with multiple engines to provide further redundancy and related reliability and the operation of the power and start systems.

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